

1948. W. W. RUBEY. The problem of changes in composition of sea water and atmosphere during the geologic past. (Bull. Geol. Soc. Amer. **62**: 1111-1148. 1951.)
1949. J. S. WILLIAMS. Boundaries between geologic systems, illustrated by Paleozoic examples.
1950. L. H. ADAMS. Orbis terrarum: a century of progress.
1951. A. N. SAYRE. Our water supply.
1952. JOSIAH BRIDGE. The extent and significance of the post-Lower Ordovician discontinuity.
1953. ARTHUR A. BAKER.

PALEONTOLOGY.—*A new pelecypod genus from Upper Triassic strata in Peru.*¹
DAVID NICOL and WILLIAM T. ALLEN, U. S. National Museum.

Dr. R. W. Imlay, of the U. S. Geological Survey, showed the senior author a collection of fossils from the Atacocha Mine near Cerro de Pasco, Peru. Among the material were six valves of a peculiar species of pelecypod which Dr. Imlay thought might belong to the genus *Tutcheria* Cox, 1946. After four of the specimens were prepared, it became obvious that this material represented an undescribed genus which seems to be most closely related to the family Cardiniidae.

Family CARDINIIDAE Zittel, 1881

Isopristes Nicol and Allen, n. gen.

Type species.—*Isopristes crassus* Nicol and Allen, n. sp.

Description.—Shell thick, porcellaneous(?); valve outline subquadrate, elongate, of slight convexity; no escutcheon or lunule, although area below beak has small but deep depression; no apparent gap; beaks prosogyrate, located nearly at anterior end of dorsal border; ornamentation consisting of gentle concentric folds which are steeper at the ventral side and appear to be resting stages of growth; radial ornamentation consisting of many small, closely spaced ribs; interior margin has small but well-marked crenulations; anterior adductor muscle scar small, nearly round, deep and located below the anterior end of the hinge; posterior adductor muscle scar twice as large but not so deeply indented, located below the posterior end of the hinge plate; pallial line distinct, integripalliate (musculature much like that of the trigoniids).

The hinge, unfortunately, is imperfectly preserved in all specimens. The most striking

feature is the well-marked ridges on the sides of the teeth, which are like those of *Trigonia* except that the ridges are much farther apart, larger, and more rounded. The preserved part of the hinge is like that of the unionids or cardiniids. On the left valve there is an elongate tooth which is nearly parallel to the dorsal border. The anterior end of this tooth is just behind the beak. At its forward extremity it is joined with another tooth which is shorter and nearly perpendicular to the dorsal border. Anterior to this latter tooth is a wide flat area, and at the anterior end of the hinge plate are two small teeth which nearly surround a socket. The right valve has one prominent tooth which fits in the socket between the two prominent elongate teeth of the left valve. There also appears to be one small round tooth on the anterior portion of the hinge plate. The hinge plate of *Isopristes* is much more massive than that of the trigoniids and is more like some of the unionids and cardiniids. There is a groove behind the umbo and below the dorsal margin which may have lodged the ligament. Whether the ligament was external or internal cannot be ascertained.

Comparisons.—*Isopristes* resembles some of the genera included in the family Cardiniidae. Unfortunately, the family is not well defined, and its relationship to other groups is not well understood. *Isopristes* most closely resembles *Cardinia* Agassiz, 1841, in outline position of beaks, and some aspects of the hinge, but differs from it in having radial ribs and a crenulated interior margin. *Pachycardia* Hauer, 1857, has an outline and hinge that somewhat resemble *Isopristes* but differs from it in the absence of radial ribs, absence of crenulations on the interior margin, and the presence of a lunule. In outline and position of the beaks *Isopristes* is also similar to *Pinzonella* Reed, 1932, from the Triassic of Brazil; however, *Pinzonella* differs from *Isopristes* in having a posterior ridge on the exterior of the shell and in not having radial ornamentation

¹The authors greatly appreciate the help of Dr. R. W. Imlay, of the U. S. Geological Survey, for allowing us to work on the material and giving us helpful suggestions on locality and literature data. R. F. Johnson, of the U. S. Geological Survey, gave us additional locality information.

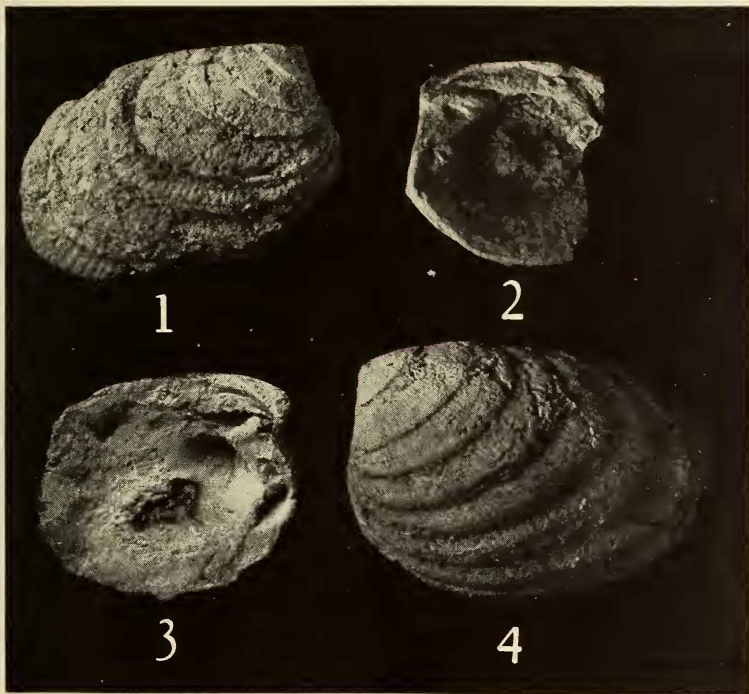
and crenulations on the interior margin. The hinge and outline of *Pinzonellopis* Mendes, 1944, also from the Triassic of Brazil, are somewhat like those of *Isopristes*, but *Pinzonellopis* differs from it in having the beak near the center of the dorsal border and in not having radial ribs and a crenulated interior margin. *Isopristes* also resembles some species of *Paleocardita* Conrad, 1867, although it has no lunule, and its hinge is different.

Isopristes crassus Nicol and Allen, n. sp.

Figs. 1-4

Description.—Shell thick, porcellaneous(?); valve outline subquadrate, dorsal and anterior borders nearly straight, ventral margin gently rounded, posterior border broadly arched; ornamentation consisting of six to eight concentric folds which appear to be resting stages of growth and are steeper on ventral side; radial ornamentation consisting of numerous small, rounded, closely-spaced radial ribs; anterior, ventral, and posterior interior margins have numerous small

closely spaced crenulations; lunule and escutcheon apparently absent, but a small and deep depression present under beaks; beaks prosogyrate, located at anterior end of dorsal margin; anterior adductor muscle scar small, round, deep, situated below anterior end of hinge plate; posterior adductor scar larger, not so deep, located below posterior end of hinge plate; pallial line integripalliate, well marked, located far from margin of shell; hinge plate high and well developed; left valve has one elongate tooth which is nearly parallel to dorsal margin and terminates under beak; tooth has coarse schizodont projections on ventral side; this tooth is connected with a shorter one at anterior end; the second tooth has few schizodont projections on dorsal side, and is nearly perpendicular to hinge plate; wide flat area present between the shorter tooth and a socket which appears to be almost surrounded by two small teeth located near anterior end of hinge plate; details of this part of hinge not well preserved. Right valve appears to have two teeth; one somewhat elongate, fits between



FIGS. 1-4.—*Isopristes crassus*: 1, Exterior view of right valve, paratype, U. S. N. M. no. 108692a; 2, interior view of part of right valve, paratype, U. S. N. M. no. 108692b; 3, interior view of part of left valve, holotype, U. S. N. M. no. 108691; 4, exterior view of left valve, paratype, U. S. N. M. no. 108692. All figures $\times 1$. All specimens are from Upper Triassic (Noric Stage); Atacocha Mine, 34 km northeast of Cerro de Pasco, Peru.

the two large teeth of left valve; the other tooth is small and round, fits into socket at anterior end of hinge plate of left valve; hinge of right valve not so well preserved as that of left valve.

Measurements in mm.—Some specimens are too incomplete to be measured accurately.

	Height	Length	Convexity (one valve)
Holotype 108691			12.2
Paratype 108692	35.3	49.3	16.7
Paratype 108692a	29.3	44.6	11.7
Paratype 108692b	27.3		10.7

Comparisons.—*Isopristes crassus* most closely resembles *Unio crassissimus* Sowerby, 1817, and *Unio listeri* Sowerby, 1817, but it differs from both these species in having a crenulated interior margin and radial ribs.

Types.—Holotype, left valve, U. S. N. M. no. 108691; five paratypes, four right valves and one left valve, U. S. N. M. no. 108692.

Age.—According to Dr. R. W. Imlay (oral communication) the bed in which *Isopristes crassus* was found is Upper Triassic (Noric Stage).

Locality.—U. S. Geological Survey locality no. 24388; Atacocha Mine, 16 km by airline (34 km by road) northeast of Cerro de Pasco, Department of Pasco, Atacocha District, Peru. The fossils came from the north side of Quebrada Chicrin, 215 meters N.85°E. from the portal of the 4,000-meter level of the Atacocha Mine.

ENTOMOLOGY.—*Hollandipsylla neali*, a new genus and new species of flea from North Borneo, with comments on eyeless fleas (*Siphonaptera*). ROBERT TRAUB, Lt. Col., M.S.C., Department of Entomology, Army Medical Service Graduate School, Washington, D. C.¹

A new genus of ceratophyllid flea was among the distinctive ectoparasites collected in North Borneo during investigations on arthropod vectors and rodent reservoirs of disease conducted by a joint U. S. Army-British Colonial Office Medical Research Unit in July and August 1951. This new genus, collected from a flying squirrel, is described and illustrated below.

Hollandipsylla, n. gen.

Unique among squirrel fleas of the subfamily Ceratophyllinae in being eyeless and in possessing only three pairs of lateral plantar bristles on

¹ The illustrations were prepared by the author, with the exception of Fig. 4, which was drawn by Thomas Evans, of the Department of Entomology,

REFERENCES

- AGASSIZ, L. *Études critiques sur les mollusques fossiles. Monographie des Myes*. 287 pp., 39 pls. Neuchatel, 1842-1845.
- BITTNER, A. *Lamellibranchiaten der Alpenen Trias*. Abh. Geol. Reichsanstalt. **18**(1): 235 pp., 24 pls. 1895.
- COX, L. R. *Tutcheria and Pseudopsis, new lamellibranch genera from the Lias*. Proc. Malac. Soc. London **27**(1): 34-48, pls. 3-4. 1946.
- . *Proposed use of the plenary powers to validate the generic name "Cardinia" (class Lamellibranchiata) as from Agassiz [1841], for use in its accustomed sense*. Bull. Zool. Nomenclature **4**: 59-64. 1951.
- . *Notes on the Trigoniidae, with outlines of a classification of the family*. Proc. Malac. Soc. London **29**(2-3): 45-70, pls. 3-4. 1952.
- MENDES, JOSUÉ C. *Lamellibrânquios Triássicos de Rio Claro (Estado de São Paulo)*. Univ. S. Paulo Faculdade Filosofia, Ciências e Letras, Bol. **45**, Geol. no. 1: 41-74, 2 pls. 1944.
- REED, F. R. COWPER. *Triassic fossils from Brazil*. Ann. Mag. Nat. Hist., ser. 10, **2**(7): 39-48, 1 pl. 1928.
- . *Some new Triassic fossils from Brazil*. Ann. Mag. Nat. Hist., ser. 10, **10**(59): 479-487, pl. 19. 1932.
- SOWERBY, JAMES. *The mineral conchology of Great Britain* **2**: 251 pp., 203 pls. London, 1817-1818.
- WAAGEN, LUKAS. *Die Lamellibranchiaten der Pachycardientuffe der Seiser Alm, etc.* Abh. Geol. Reichsanstalt **18**(2): 180 pp., pls. 25-34. 1907.
- ZITTEL, KARL A. *Handbuch der Palaeontologie* **1**(2): 893 pp., 1,109 text figs. München und Leipzig, 1881-1885.

the last segment of the tarsi, two proximal pairs being displaced mesad.

Caput integrecipit. Eye completely vestigial. Pre-antennal region with two rows of bristles. Frontal tubercle small. Postantennal region with but one complete row of bristles and that marginal. Antennal segment II with bristles short in male, not reaching beyond proximal fourth of club; in female, extending beyond middle of club. Antennal groove extending onto propleuron in male. Labial palpi subequal in length to forecoxae. First vinculum or link plate (Fig. 1, VC. 1) received in distinct sinus of prosternosome; second and third vincula well developed; fourth

Army Medical Service Graduate School, to whom I am indebted.